LINQ

Network Power Distribution Module

Installation and Programming Manual

LINQ8PD

- Network Power Distribution Module
- Eight (8) Fused Outputs

LINQ8PDCB

- Network Power Distribution Module
- Eight (8) PTC Outputs

Altronix®

More than just power.™

DOC#: LINQ8PD Rev. 110515

Overview:

Altronix LINQ8PD(CB) network power distribution module facilitates monitoring, reporting and control of one (1) or two (2) low voltage AC or supervised DC power supply/chargers over the network. Reports diagnostics via Email/SNMP notifications greatly reducing system downtime and eliminating unnecessary service calls. LINQ8PD(CB) retrofits with most currently installed multi-output power supply/chargers.

Specifications:

Input Power:

- Input1/Input2: 12VAC-28VAC @ 12.5 amp each or 12VDC/28VDC @ 12.5 amp each
  Note: Do connect AC and DC simultaneously to INP1 and INP2

Outputs:

- Eight (8) fused or PTC protected outputs:
  - LINQ8PD: Blade fuses are rated 3 amps
  - LINQ8PDCB: PTCs are rated 2.5 amps
- Power output(s) can be locally or remotely controlled
- Surge Suppression

Status Monitoring:

- Power Supply(ies) output voltage and load
- Voltage and load of each output
- FACP trigger and reset status
- Unit temperature (Celsius)
- Power Supply AC and Battery status
- Battery health

Programming Features:

- Power Supply(ies) voltage and load limits (High/Low)
- FACP trigger type (wet or dry-N.O./N.C.)
- Input Function (FACP reset/tamper)
- Output Reset Trigger (N.O./N.C.)
- Battery Monitor Configuration:
  - Capacity
  - Charge Level
  - Max. Charge and Discharge Current
  - Service Date
- Configurable Output Relay(s)
- Individual Output Configuration:
  - Device ID
  - Voltage and Current Limits (High/Low)
  - FACP Trigger Setting (latching/non-latching/inactive)
  - Battery Backup

Network Security:

- Secure Socket Layer (SSL)

Reporting:

- SNMP trap messages.
- E-mail notifications
- Event Log tracks history

Fire Alarm Interface:

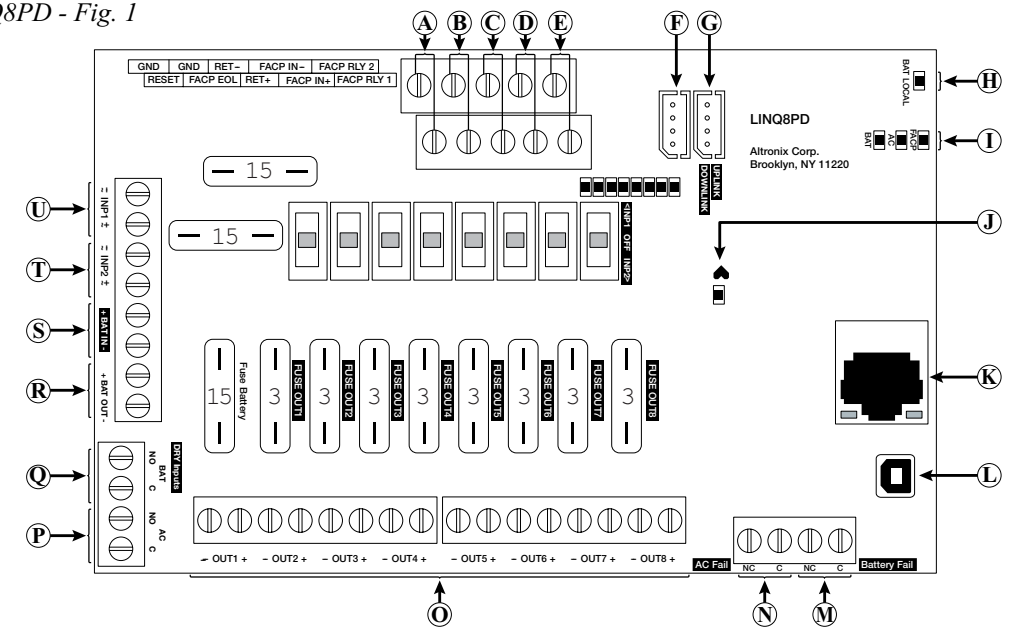
- Supervised FACP disconnect (Latching or Non-Latching)
- FACP reset (N.C. or N.O.)

Mechanical:

- Board Dimensions: 5.5”L x 3.625”W x 0.96”H (139.7mm x 92.07mm x 24.38mm)
- Product weight (approx.): 0.4 lbs. (0.18kg)
- Shipping weight (approx.): 0.7 lbs. (0.32kg)

Terminal/Connector Identification:

LINQ8PD - Fig. 1



Terminal/Connector Identification:

Terminal/Legend		Description
Ⓐ	GND, RESET	FACP reset.
Ⓑ	GND, FACP EOL	Connects to EOL or next LINQ8PD(CB).
Ⓒ	+ RET –	FACP EOL, or next LINQ8PD(CB).
Ⓓ	FACP – IN +	Wet input from FACP +.
Ⓔ	FACP RLY 1, 2	FACP reporting relay.
Ⓕ	Downlink	Connection to power supply or second LINQ8PD(CB) module.
Ⓖ	Uplink	Connects to next LINQ8PD(CB) upstream from this module. If this is the first LINQ8PD(CB) in the daisy chain this connector is not used.
Ⓗ	BAT Local LED	Indicates battery(ies) thresholds.
Ⓘ	FACP/AC/BAT LEDs	Indicates status of FACP, AC and Battery.
Ⓙ	Heartbeat LED	Indicates the LINQ8PD(CB) is operational.
Ⓚ	RJ45	Ethernet: LAN or laptop connection enables LINQ8PD(CB) programming and status monitoring.
Ⓛ	USB	Laptop connection enables LINQ8PD(CB) initial setup and programming.
Ⓜ	Battery Fail NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 30VDC.
Ⓝ	AC Fail NC, C, NO	Indicates loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 30VDC (power-limited).
Ⓞ	+ OUT1 – to + OUT8 –	24VAC/28VAC or 12VDC/24VDC continuous output.
Ⓟ	AC / NO, C	Connection to [AC Fail] terminals on power supply.
Ⓠ	BAT / NO, C	Connection to [BAT Fail] terminals on power supply.
Ⓡ	+ BAT OUT –	Connection to stand-by batteries.
Ⓢ	+ BAT IN –	Connection to [+ BAT –] terminals on power supply.
Ⓣ	– INP2 +	Second AC or DC power supply input. **Note:** Do connect AC and DC simultaneously to INP1 and INP2.
Ⓤ	– INP1 +	First AC or DC power supply input. **Note:** Do connect AC and DC simultaneously to INP1 and INP2.

LED Diagnostics:

LED	Flash Codes	Description
BAT LOCAL	ON	Charge/Discharge current working properly
	Blinking	Charge/Discharge current on the battery exceed limits
FACP	ON	FACP triggered
	OFF	FACP released
AC	ON	Input signal active
	OFF	Input signal inactive
BAT	ON	Input signal active
	OFF	Input signal inactive
OUT1-OUT8	ON	Output is ON and working properly
	OFF	Output is OFF
	Blinking	Output is ON and voltage and/or current exceeds limits

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, and with all local codes and authorities having jurisdiction.
Product is intended for indoor use only and should be installed by qualified personnel.

1. Disconnect the AC mains and batteries (if used) from the power supply(ies) before connecting the LINQ8PD(CB)
2. Mount LINQ8PD(CB) into position and secure with mounting screws.
   Interconnecting two (2) LINQ8PD(CB) modules:
   Two (2) LINQ8PD(CB)s can be interconnected to enable both units to be accessed from a single IP address. Connect interface cable (supplied) to the interface port marked [DOWNLINK] of first LINQ8PD(CB) which will be the master to interface port marked [UPLINK] of second LINQ8PD(CB).
3. **Power Supply Input Connection:**
   The LINQ8PD(CB) can be connected to two independent AC or DC power supplies that can be routed thru each of the individual outputs. Each output is equipped with an input selection switch which is used to route the desired input to the output. This switch also has a center off position that can be used to turn power off to an output.
   (a) Single Power Supply Input:
   Connect the output of the power supply to the terminals marked [+INP1-] and set the Input selection switch for each output to the [INP1] position.
   (b) Dual Power Supply Inputs:
   When the use of two independent power supplies is desired connect one power supply to the terminals marked [+INP1-] and the second power supply to the terminals marked [+INP2-]. Set the Input selection switch for each output to the appropriate position. Reconnect the AC mains of the connected power supply(ies) and verify the voltage of each of the eight outputs. This helps avoid potential damage. Disconnect the AC mains of the connected power supply(ies).
   Note: Do connect AC and DC simultaneously to INP1 and INP2.
4. **Output Connections:**
   Connect devices to be powered to the terminals marked [-OUT1+ to -OUT8+] on LINQ8PD(CB) carefully observing polarity. When two power supplies are connected to the LINQ8PD(CB) verify that the output voltage matches the operating voltage of the connected devices.
5. **Battery Connections:**
   Skip this step when connecting AC power supplies or DC power supply(ies) without batteries. Connect the power supplies battery charging circuit to the terminals marked [+BAT IN-], connect the battery leads to the terminals marked [+BAT OUT-].
   Note: Do not connect battery(ies) until all connections have been made.
   For 24VDC operation connect two 12VDC batteries in series using the supplied yellow battery jumper. For Access Control applications batteries are optional. When batteries are not used, a loss of AC will result in the loss of output voltage. When the use of stand-by batteries is desired, they must be lead acid or gel type.
6. **Battery and AC Supervision Connections:**
   Skip this step when connecting AC power supplies
   These connections are required to monitor AC and Battery Trouble conditions. These conditions cannot be monitored when connected to a non-supervised power supply.
   Connect the common (C) and normally open (N.O.) contact of the power supplies AC and Battery supervision relay to the corresponding DRY Inputs of the LINQ8PD(CB).
   If required to connect supervisory trouble reporting devices to outputs marked [AC FAIL, BAT FAIL] supervisory relay outputs marked [NC and C] to appropriate notification devices. Use 22 AWG to 18 AWG for supervision reporting.
7. **Fire Alarm Interface options:** (not evaluated by UL)
   The Fire Alarm Interface and Reset options are programmable via the web interface. FAI input trigger options: supervised normally closed [NC], normally open [NO], polarity reversal input from signaling circuit or wet input will trigger selected outputs.
   (a) Normally Open [NO] input:
   Connect the supplied 2.2k resistor (supplied) in parallel with the normally open trigger circuit to the terminals marked [GND, FACP EOL].
   (b) Normally Closed [NC] input:
   Connect the supplied 2.2k resistor (supplied) in series with the normally closed trigger circuit to the terminals marked [GND, FACP EOL].
   (c) Signaling Circuit/Wet input trigger:
   Connect the positive (+) and negative (-) of the signaling circuit/wet input trigger to the terminals marked [FACP IN + and [FACP IN -].
   (d) Fire Alarm Reset:
   If a output is programmed to latch with manual reset connect either a normally open (N.O.) or normally closed (N.C.) dry input to the terminals marked [RESET & GND]
8. Reconnect AC power mains to the connected power supply(ies) and connect back-up batteries.

Establishing Network Connection:

Network Setup - Altronix Dashboard USB Connection

The USB connection on the LINQ8PD(CB) is used for Network and Trap Receiver configuration only. When connected to a PC via the USB cable the LINQ8PD(CB) will receive power from the USB port allowing programming of the LINQ8PD(CB) prior to being connected to the power supply.

1. Install the software supplied with the LINQ8PD(CB) on the PC being used for programming. This software should be installed on all computers that will have access to the LINQ8PD(CB).
2. Connect the supplied USB cable to the USB port on the LINQ8PD(CB) and the computer.
3. Click [Dashboard Icon] on the desktop of the computer and open the Dashboard.
4. Click [USB Network Setup] button located in the upper right hand side of the Dashboard. This will open the USB Network Setup screen. In this screen the MAC Address of the LINQ8PD(CB) module will be found along with the Network Settings, Trap Receiver Settings and SNMP Port Settings.

1. Network Settings *(Fig. 2a, pg. 5)*:
In the IP Address Method field select the method that the IP Address for the LINQ8PD will be obtained "Static" or "DHCP" then follow the appropriate steps.

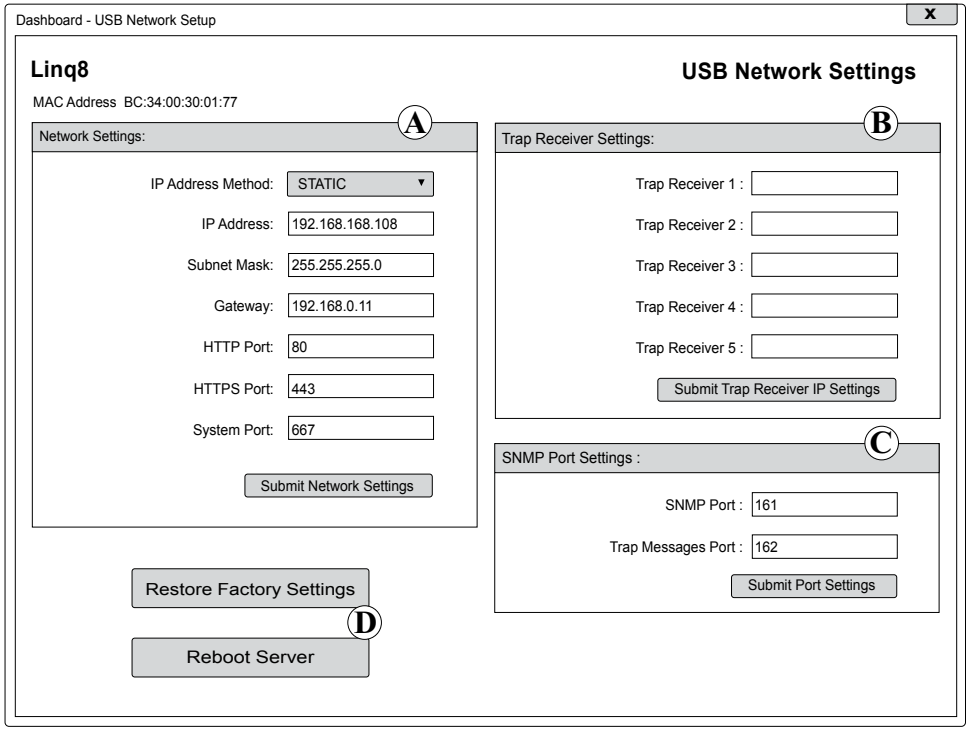
STATIC:

Field Name	Description
IP Address	Enter the IP address assigned to the LINQ8PD(CB) by the network administrator.
Subnet Mask	Enter the Subnet of the network.
Gateway	Enter the TCP/IP gateway of the network access point (router) being used **Note:** Gateway configuration is required to properly receive emails from the device.
HTTP Port	Enables standard remote access and monitoring. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 80.*
HTTPS Port	Enables secure remote access and monitoring. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 443.*
System Port	Used to update device firmware. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 667*

a. Click [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK".

***Note:** When remote access is required or using multiple devices on the same network it is recommended to assign an independent port to each connected device.

Fig. 2



DHCP *(Fig. 2a, pg. 5)*:
Connect LINQ8PD(CB) to the DHCP router to obtain IP address.

a. After selecting DHCP in the IP Address Method field click [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK". Next click [Reboot Server] button *(Fig. 2d, pg. 5)*. After the LINQ8PD(CB) reboots the IP address assigned will appear in the IP Address field. It is recommended to have the assigned IP Address reserved on the router to ensure continued access to the LINQ8PD(CB) (see the network administrator).

Field Name	Description
Subnet Mask	When operating in DHCP the router will assign the subnet mask values.
Gateway	Enter the TCP/IP gateway of the network access point (router) being used.
HTTP Port	Enables standard remote access and monitoring. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 80.*
HTTPS Port	Enables secure remote access and monitoring. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 443.*
System Port	Used to update device firmware. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 667*

b. Click [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK".

***Note:** When remote access is required or using multiple devices on the same network it is recommended to assign an independent port to each connected device.

2. Trap Receiver Settings *(Fig. 2b, pg. 5)***:**

a. Enter up to five SNMP trap receiver IP addresses. When accessing the LINQ8PD(CB) remotely, check with the network administrator for proper configuration.

b. Click [Submit Trap Receiver IP Settings] button, a dialog box will display "New Trap Receiver IP settings will take effect after the server is rebooted" click "OK".

3. SNMP Port Settings *(Fig. 2c, pg. 5)***:**

SNMP uses the default port 161 for general SNMP messages and port 162 for SNMP trap messages. In the event these ports need to be changed, enter the new port numbers assigned by the network administrator.

a. Click [Submit Port Settings] button, a dialog box will display "New Port settings will take effect after the server is rebooted" click "OK".

b. After all information has been entered, Click [Reboot Server] button *(Fig. 2d, pg. 5),* a dialog box will display "Please allow up to 30 sec for the server to reboot", click "OK".

c. After the LINQ8PD(CB) has been rebooted all programmed information will be saved.

d. Disconnect the USB cable from the LINQ8PD(CB) module. If the LINQ8PD(CB) has not been connected to the power supply(ies) being monitored, *(refer to Installing LINQ8PD Board on pg. 2)*.

e. Connect one end of the network cable to the network jack on the LINQ8PD(CB) and the other to the network connection or the PC to be used for programming.
Note: Email notification must be setup via the Browser, Ref to Email Settings in the Browser Setup section of this manual.

Browser Setup

When not using the Altronix Dashboard USB connection for the initial Network setup, the LINQ8PD(CB) needs to be connected to the power supply(ies) being monitored *(refer to Installing LINQ8PD Board on page ??)* prior to programming.

Factory Default settings:

- IP Address: 192.168.168.168
- User Name: admin
- Password: admin

1. Set the static IP address for the laptop to be used for programming to the same network IP address as the LINQ8PD(CB) i.e. 192.168.168.200 (default address of the LINQ8PD(CB) is 192.168.168.168).
2. Connect one end of the network cable to the network jack on the LINQ8PD(CB) and the other to the network connection of the laptop.
3. Open a browser on the computer and enter "192.168.168.168" into the address bar. A dialog box Authentication Required will appear requesting both user name and password enter the default values here.
4. Click [Log In] button. The status page of the LINQ8PD(CB) will appear. This page displays the real time status and health of each power supply connected to the LINQ8PD(CB).

1. Network setup:

Click [Network Settings] tab. This will open the Network Setting screen. In this screen the MAC Address of the LINQ8PD(CB) module will be found along with the programming fields for the Network Settings, Trap Receiver Settings, SNMP Port Settings and Email Settings.

Network Settings *(Fig. 3a, pg. 7)*:

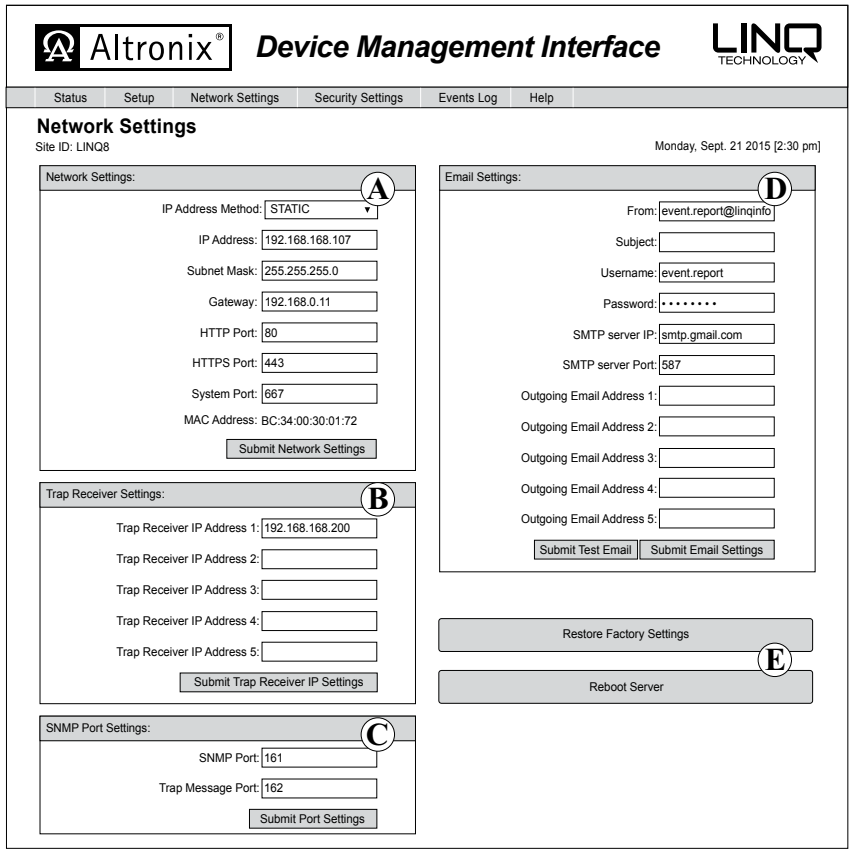
In the IP Address Method field select the method that the IP Address for the LINQ8PD(CB) will be obtained "Static" or "DHCP" then follow the appropriate steps.

STATIC *(Fig. 3a, pg. 7)*:

Field Name	Description
IP Address	Enter the IP address assigned to the LINQ8PD(CB) by the network administrator.
Subnet Mask	Enter the Subnet of the network.
Gateway	Enter the TCP/IP gateway of the network access point (router) being used **Note:** Gateway configuration is required to properly receive emails from the device.
HTTP Port	Enter the HTTP port number assigned to the LINQ8PD(CB) module by the network administrator to allow remote access and monitoring. The default inbound port setting is 80. HTTP is not encrypted and unsecure. Even though HTTP can be used for remote access it is recommended primarily for use with LAN connections.
HTTPS Port	Enter the HTTPS port number assigned to the LINQ8PD module by the network administrator to allow remote access and monitoring. The default inbound port setting is 443. Being encrypted and more secure HTTPS is highly recommended for remote access.
System Port	Used to update device firmware. Enter the port number assigned to the LINQ8PD(CB) module by the network administrator. Default Port setting 667*

a. Click [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK".

Fig. 3



DHCP *(Fig. 3a, pg. 7)*:

After selecting DHCP in the IP Address Method field click [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK". Next click [Reboot Server] button. After rebooting the LINQ8PD(CB) will be set in the DHCP mode. The IP address will be assigned by the router when the LINQ8PD(CB) is connected to the network. It is recommended to have the assigned IP Address reserved to ensure continued access (see the network administrator).

Field Name	Description
Subnet Mask	When operating in DHCP the router will assign the subnet mask values.
Gateway	TCP/IP gateway of the network access point (router) being used will be displayed.
HTTP Port	Enter the HTTP port number assigned to the LINQ8PD(CB) module by the network administrator to allow remote access and monitoring. The default inbound port setting is 80. HTTP is not encrypted and unsecure. Even though HTTP can be used for remote access it is recommended primarily for use with LAN connections.
HTTPS Port	Enter the HTTPS port number assigned to the LINQ8PD(CB) module by the network administrator to allow remote access and monitoring. The default inbound port setting is 443. Being encrypted and more secure HTTPS is highly recommended for remote access.

Click the [Submit Network Settings] button, a dialog box will display "New network settings will take effect after the server is rebooted" click "OK".

Trap Receiver Settings *(Fig. 3b, pg. 7)***:**
a. Enter up to five SNMP trap receiver IP addresses. When accessing the LINQ8PD(CB) remotely check with the network administrator for proper configuration.
b. Click [Submit Trap Receiver IP Settings] button, a dialog box will display "New Trap Receiver IP settings will take effect after the server is rebooted" click "OK".

SNMP Port Settings *(Fig. 3c, pg. 7)***:**
SNMP uses the default port 161 for general SNMP messages and port 162 for SNMP trap messages. In the event these port need to be changed enter the new port numbers assigned by the network administrator. Click [Submit Port Settings] button, a dialog box will display "New SMNP port settings will take effect after the server is rebooted" click "OK".

Email Settings *(Fig. 3d, pg. 7)***:**
The LINQ8PD(CB) can send emails via an in-house email server, email service provider (i.e. Gmail, Yahoo) or Altronix default email service.

In-house email server:

Field Name	Description
From	Enter the email address assigned to the LINQ8PD(CB) module by the system administrator.
Subject	Identify the location of the v (i.e. the Site ID).
Username	Enter the username associated with the LINQ8PD(CB) module email address.
Password	Enter the username password.
SMTP server IP	Enter the SMTP IP address of the in-house email server.
SMTP server Port	Enter the SMTP port assigned to the in-house email server.
Outgoing Email Address 1-5	Enter up to five outgoing email addresses.

a. Click [Submit Email Settings] button and the email settings will be saved.

Email service provider:

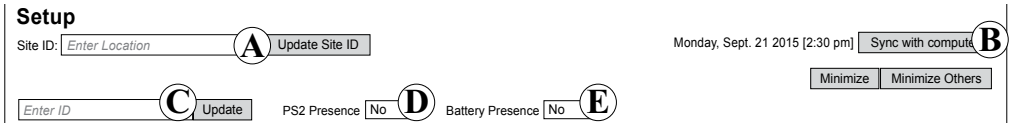
Field Name	Description
From	Enter the email address for the LINQ8PD(CB) module.
Subject	Identify the location of the LINQ8PD(CB) (i.e. the Site ID).
Username	Enter the username associated with the LINQ8PD(CB) module email address.
Password	Enter the username password.
SMTP server IP	Enter the SMTP IP address of the email service provider.
SMTP server Port	Enter the email SMTP port number. The default SMTP email ports are 25 or 465 unless otherwise specified.
Outgoing Email Address 1-5	Enter up to five outgoing email addresses.

a. Click [Submit Email Settings] button and the email settings will be saved.

Altronix default email service:
a. All required sender and network fields have already been populated.
b. Outgoing Email Address 1-5: Enter up to five outgoing email addresses.
c. Click [Submit Email Settings] button to save the email settings.
d. Test the email setup by clicking [Test Email] button.
e. An email will be sent to all Outgoing email addresses. If the test email is not received contact the network administrator and repeat the email setup steps.
f. After all fields have been programed, click [Reboot Server] button, a dialog box will display "Please allow up to 30 sec. for server to reboot" click "OK". All programmed information will be saved after the server has rebooted.

2. Setup *(Fig. 4, pg. 9)***:**
Note: If the Altronix Dashboard is being used for LINQ8PD(CB) setup, refer to the Folder and Device configuration section in the Altronix Dashboard setup/user manual. Click on [Setup] tab. The LINQ8PD(CB) setup page will open.
This page is used to configure all operating functions of the LINQ8PD(CB).

Fig. 4



Field Name		Description
Ⓐ	Site ID	Enter a descriptive name that will identify the location (building, company or campus) where the LINQ8PD(CB) installed. The Site ID will appear in both the trap message and email notifications.
Ⓑ	Date/Time	Clicking on [Sync Date/Time with Computer], will set the LINQ8PD(CB) to the time of the host computer.
Ⓒ	LINQ8PD(CB) ID	Enter a descriptive name and/or location of the LINQ8PD(CB).
Ⓓ	PS2 Presence	From the pull down menu select No to disable PS2 if only one power supply is connected.
Ⓔ	Battery Presence	From the pull down menu select No if batteries are not connected. If batteries are not connected skip this section.

PS1/PS2 Amps/Voltage Limits *(Fig. 5, pg. 9)***:**

Field Name	Description
PS1/PS2 Voltage Limit	Enter both the Voltage Limit High and Voltage Limit Low for the connected power supplies. If either of these limits are exceeded an SNMP trap message and/or email notification will be generated.
PS1/PS2 Amp Limit	Enter both the Amp Limit High and Amp Limit Low for the connected power supplies. If either of these limits are exceeded an SNMP trap message and/or email notification will be generated.

Fig. 5

PS1 Volts High Limit	27.7	V
PS1 Volts Low Limit	4	V
PS1 Amps High Limit	3	A
PS1 Amps Low Limit	0	A

FACP Trigger *(Fig. 6, pg. 9)***:** From the pull down menu select either Wet or Dry.

Select	Description
Wet Trigger	Input voltage from the fire alarm signal circuit will disconnect all outputs programmed for FACP disconnect.
Dry Trigger	A short or open on the supervised FACP input will disconnect all outputs programmed for FACP disconnect.

Input Function *(Fig. 6, pg. 9)***:** From the pull down menu select either Reset or Tamper.

Select	Description
Reset	When using the FACP Interface with outputs set in latching mode the reset trigger input is designated as the FACP manual release.
Tamper	When the outputs are set in non-latching mode or the FACP interface is not being used the reset trigger input.

Fig. 6

FACP Trigger	Dry ▼	
Input Function	Reset ▼	
Output Reset Trigger	N.C. ▼	
Max Temp	50	°C

Output Reset Trigger *(Fig. 6, pg. 9)***:** From the pull down menu select either N.O. or N.C.

Select	Description
N.O.	Normally Open reset Trigger Input.
N.C.	Normally Closed Trigger input.

Max Temp: The LINQ8PD(CB) will measure the ambient temperature of the enclosure it is mounted in. Entering a high temperature limit in Celsius, if this limit is exceeded an SNMP trap message and/or email notification will be generated.

Battery Monitor Configuration *(Fig. 7, pg. 10)***:** The LINQ8PD(CB) displays the real time battery health.

Select	Description
Battery Capacity	Enter the battery rating in amp hours.
Battery Charge Level	Enter the estimated percentage charge level of the Battery at the time of installation.
Max. Battery Discharge Current	Enter the high current limit to be drawn from the battery in the event of a power failure. If this limit is exceeded an SNMP trap message and/or email notification will be generated.
Max. Charge Current	Enter the maximum charge current of the connected power supply. If this limit is exceeded an SNMP trap message and/or email notification will be generated.
Battery Service Date	Enter the date on which the installed batteries need to be serviced. An SNMP trap message and/or email notification will be generated on the entered date. **Note:** Batteries should be inspected at least once a year. Even though the expected battery life is 5 years, it is recommended changing batteries in 4 years.

Output Relay configuration *(Fig. 7, pg. 10)***:**
Three (3) output relays of the LINQ8PD(CB) can be configured for various uses. From the pull down menu select the desired setting for each relay.

Output Relay 1:	
Setting	**Description**
AC	The relay will energize when AC trouble is detected.
Com Trouble	The relay will energize when on all trouble conditions.

Output Relay 2:	
Battery	The relay will energize when Battery trouble is detected.
Tamper	The relay will energize when the tamper input is triggered.

Output Relay 3	
FACP	The relay will energize when the FACP input is triggered.
Tamper	The relay will energize when the tamper input is triggered.

Fig. 7

Bat Capacity	7	AH	Battery Service Date	02 /02 / 2015
Bat Charge Level	90	%	Output Relay 1	Com Trouble ▼
Max Battery Discharge Current	2.75	A	Output Relay 2	Tamper ▼
Max Charge Current	0.9	A	Output Relay 3	FACP ▼

Fig. 8

Output	Device ID	Current High (A)	Current Low (A)	Voltage High (V)	Voltage Low (V)	FACP Trigger	Battery Backup	Output Status
1	Enter ID	3	0	27.7	3	Latching ▼	Yes ▼	On Off

Output Configuration *(Fig. 8, pg. 10)***:**

Field Name	Description
Device ID	Enter a descriptive name for the device connected to the output.
Current High/Low	Enter both the high current limit and low current limit in the appropriate fields for the connected Device. If either of these limits are exceeded an SNMP trap message and/or email notification will be generated.
Voltage High/Low	Enter both the high voltage limit and low voltage limit in the appropriate fields for the connected Device. If either of these limits are exceeded an SNMP trap message and/or email notification will be generated.

FACP Trigger *(Fig. 8, pg. 10)***:** From the pull down menu select how the output will operate when the FACP input is triggered.

FACP Trigger Setting	Function/Description
Inactive	The selected output will not switch when the FACP input is triggered.
Non Latching	The selected output will switch when the FACP input is triggered and reset when the FACP trigger input is returns to a non-triggered state.
Latching	The selected output will switch to a latched position when the FACP input is triggered. The selected output will remain latched until the Output Reset is triggered.

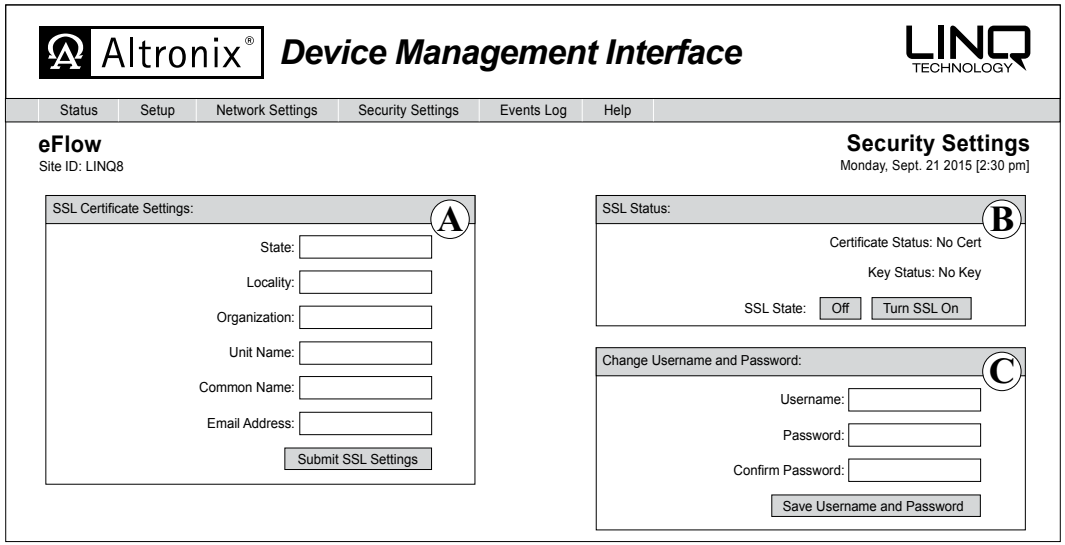
Battery Backup *(Fig. 8, pg. 10)***:** From the pull down menu select Yes if the output will remain ON in the event of a power failure. Select No if the output will turn OFF in the event of a power failure.

Output Status *(Fig. 8, pg. 10)***:** Output Status indicates if the output is On (powered) or Off (not powered). The output can be turned on or off the clicking [On/Off] button. After all fields have been programmed, click on [Submit Setting] button, a dialog box will display, New Setting Submitted click "OK". All programmed information in now saved.

3. Security Settings *(Fig. 9, pg. 11)***:**

Click on [Security Settings] tab. The LINQ8PD(CB) security setting page will open. This section is used to enable/disable Secure Socket Layer (SSL) and to change Username and Password. SSL will encrypt all the communication with a secure key. An SSL certificate could be self-signed or obtained from a third party certification company.

Fig. 9



SSL Certificate Setting *(Fig. 9a, pg. 11)***:**

Generating a self-signed SSL Certificate and Key.

Field Name	Description
State	Two letter code representing the state where the organization is located.
Location	The city where the organization is located.
Organization	The legal name of the organization. This should not be abbreviated, and should include suffixes such as Inc., Corp, or LLC.
Unit Name	Name of the device.
Common Name	Domain name or IP address of the server. This is typically assigned by the network administrator.
Email Address	An email address used to contact the organization.

After all fields have been completed click [Submit SSL Settings] button, a dialog box will appear "Please allow up to 30 sec for server to reboot" click "OK". A self-signed SSL certificate will be generated with the information provided in the "SSL certificate settings" fields. The certificate will be valid for 500 days, and time stamped with the time settings present on the LINQ8PD(CB) module. The date and time must be synced with the host computer before generating an SSL certificate.

Using a private SSL certificate and Key:

Private SSL Certificates and Keys must be uploaded using the Altronix Dashboard. For additional information refer to the Altronix Dashboard setup/user manual section "Updating firmware / SSL certificate and Key".

SSL Status:

Certificate Status *(Fig. 9b, pg. 11)*:

Message	Descriptions
Certificate OK	Valid SSL Certificate.
Bad Certificate	Invalid SSL Certificate.
No Certificate	A Valid SSL Certificate has not been loaded.

Key Status *(Fig. 9b, pg. 11)*:

Message	Descriptions
Key OK	Valid SSL Key.
Bad Key	Invalid SSL Key.
No Key	A valid SSL Key has not been loaded.

SSL State: The SSL of the LINQ8PD(CB) can be turned on and off by clicking [Turning SSL On/Turning SSL Off] button.

Change Username and Password:

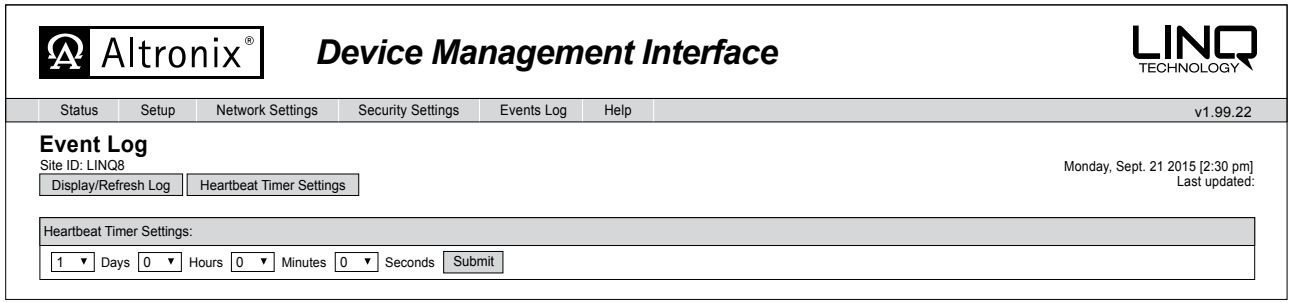
Field Name	Description
Username	Enter the new Username (up to 32 characters) required to access the LINQ8PD(CB).
Password	Enter the new Password (up to 32 alpha numeric characters) required to access the LINQ8PD(CB).
Confirm Password	Re-enter the new Password.

Click [Save Username and Password] button, a dialog box with appear, "New settings have been applied" click "OK".
After saving, the new username and password will be active.

4. Event Log and Heartbeat Timer *(Fig. 10, pg. 12)***:**

Click [Event Log] tab.
The LINQ8PD(CB) event log will open.
This screen will display the event log along with the heartbeat timer setup.

Fig. 10



Event Log: The event log will display the 50 most recent events.
To update the Event Log click [Display/Refresh Log] button, the most recent events will be displayed.

Heartbeat Timer: The heartbeat timer will send a trap message indicating that the LINQ8PD(CB) is still connected and communicating.

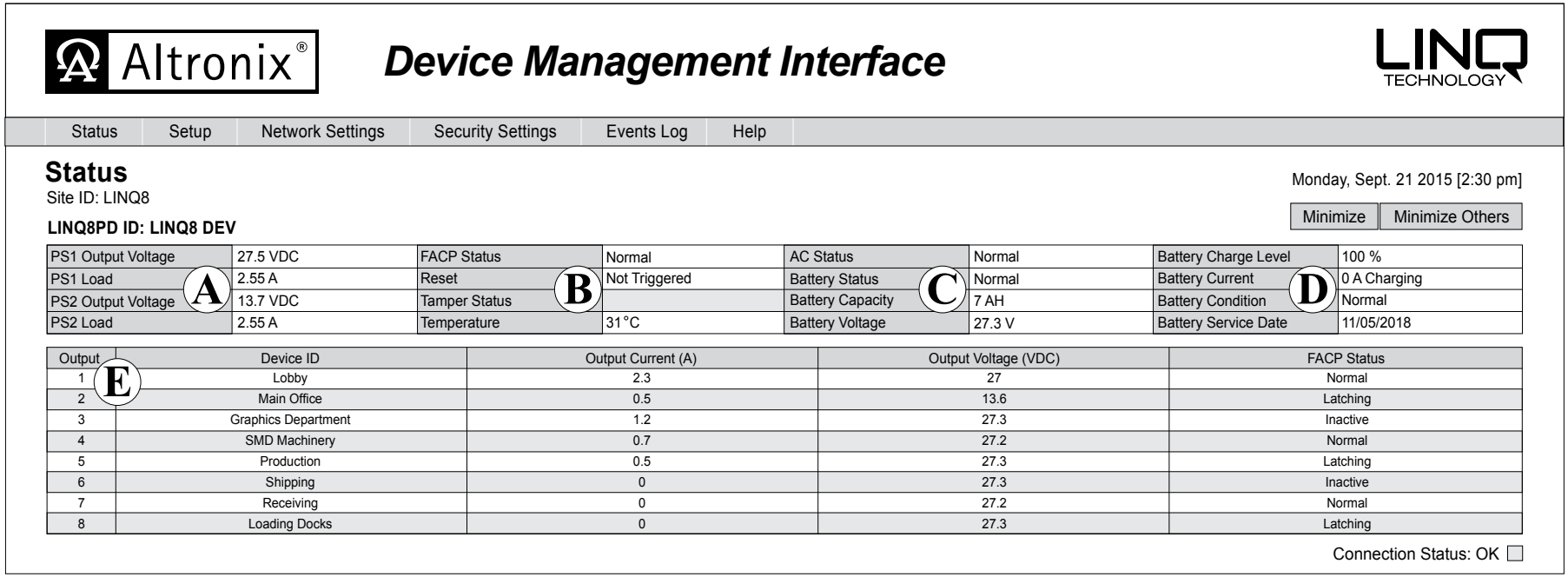
5. Setting the Heart Beat Timer:

a. Click the button labeled Heartbeat Timer Setting.
b. Select the desired time between heartbeat messaging in the Days, Hours, Minutes and Seconds in corresponding fields.
c. Click the button labeled Submit to save setting.

6. Updating Firmware:

Firmware updates must be done using the Altronix Dashboard. For additional information refer to the Updating firmware / SSL certificate and Key section in the Altronix Dashboard setup/user manual.

Fig. 11



Status Identification:

Fields		Description
Ⓐ	PS1/ PS2 Output Voltage & Load	Indicates Power Supply 1 and 2 output voltage and load.
Ⓑ	FACP Status	Indicates if FACP is triggered or not triggered.
	Reset	Indicates if FACP Reset is triggered or not triggered.
	Tamper Status	Indicates if Tamper is triggered or not triggered..
	Temperature	Indicates unit temperature (Celsius).
Ⓒ	AC Status	Indicates AC trouble contact status.
	Battery Status	Indicates Battery trouble contact status.
	Battery Capacity	Indicates Amp/Hour rating of the connected battery(ies).
	Battery Voltage	Indicates battery voltage of the connected battery(ies).
Ⓓ	Battery Charge Level	Indicates the charge level of the connected battery(ies).
	Battery Current	Indicates the battery charge/discharge rate in amps.
	Battery Condition	Indicates the condition of the connected battery(ies).
	Battery Service Date	Indicates the next service date of the connected battery(ies).
Ⓔ	Output 1-8	Indicates output.
	Device ID	Descriptive name for the device connected to the output
	Output Current (A)	Indicates output load in amps.
	Output Voltage (V)	Indicates output voltage in volts.
	FACP Status	Indicates FACP status of the output.

Notes:

Notes:

Notes:

Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056
website: www.altronix.com, e-mail: info@altronix.com, Made in U.S.A.